

Conference Abstract

# Hazards and Disasters in the Geological and Geomorphological record: A key to understanding past and future hazards and disasters and their impact on life

Jiri Frank<sup>‡</sup>, Laura J. Tilley<sup>§</sup>, Björn Berning<sup>|</sup>, Boglárka Erdei<sup>¶</sup>, Charalampos Fassoulas<sup>#</sup>, Andreas Kroh<sup>□</sup>, Jiří Kvaček<sup>‡</sup>, Patricia Mergen<sup>«</sup>, Caroline Michellier<sup>»</sup>, Giles Miller<sup>^</sup>, Michael Rasser<sup>˘</sup>, Ralf T Schmitt<sup>‡</sup>, Johanna Eder<sup>§</sup>

<sup>‡</sup> National Museum, Prague, Czech Republic

<sup>§</sup> State Museum of Natural History Stuttgart, Stuttgart, Germany

<sup>|</sup> Oberösterreichisches Landesmuseum, Leonding, Austria

<sup>¶</sup> Hungarian Natural History Museum, Budapest, Hungary

<sup>#</sup> Natural History Museum Crete, University of Crete, Greece

<sup>□</sup> Naturhistorisches Museum, Vienna, Austria

<sup>«</sup> Botanic Garden Meise, Meise, Belgium

<sup>»</sup> Africamuseum, Natural Hazards service, Tervuren, Belgium

<sup>^</sup> Natural History Museum, London, United Kingdom

<sup>˘</sup> Staatliches Museum für Naturkunde Stuttgart, Stuttgart, Germany

<sup>‡</sup> Museum für Naturkunde Berlin, Berlin, Germany

Corresponding author: Jiri Frank ([jiri\\_frank@nm.cz](mailto:jiri_frank@nm.cz))

Received: 03 May 2019 | Published: 21 Jun 2019

Citation: Frank J, Tilley L, Berning B, Erdei B, Fassoulas C, Kroh A, Kvaček J, Mergen P, Michellier C, Miller G, Rasser M, Schmitt R, Eder J (2019) Hazards and Disasters in the Geological and Geomorphological record: A key to understanding past and future hazards and disasters and their impact on life. Biodiversity Information Science and Standards 3: e35905. <https://doi.org/10.3897/biss.3.35905>

## Abstract

Hazards and disasters have occurred throughout Earth's History and thus the geological record is an important resource for understanding future hazards and disasters and its Impact. The Earth Science Group (ESG) of the Consortium of European Taxonomic Facilities (CETAF) carried out a “Hazard and Disaster Event Survey” to identify Earth Science collections in European museums that represent hazards and disasters throughout the geological record, and recent times. The aim is to use the collections within

the survey as an educational and research resource that promotes the importance of museum collections for understanding past and future hazard and disaster events. The survey pinpointed a wide variety of hazards (e.g. earthquakes, volcanism, floods, impact events, etc.), representing a vast time span in Earth's history (Proterozoic to Holocene), that are documented in the collections of the participating museums. Each hazard and disaster event has been described in terms of how each is preserved (e.g. fossil record or rock record), spatial scale, impact on life and biodiversity, and geological age. The results were published in Research ideas and outcomes journal RIO (<https://riojournal.com/article/34087/>) as seven examples, which include well-known and less-known events from the survey that have contributed to our understanding of hazard and disaster processes and their impact on life and biodiversity. For better visualisation and education purposes we also created a specialised website, which will be launched during summer 2019. In the presentation we will talk about general conclusions and lessons learnt from the "Hazard and Disaster Event Survey".

## **Keywords**

hazards, disasters, earth science, museum collections, geological record, fossils, rocks, minerals, biodiversity, climate, Geology, Paleontology

## **Presenting author**

Jiri Frank

## **Presented at**

Biodiversity\_Next 2019